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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,229	12/14/2000	Jin-Hong Kim	850795.90026	6287

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EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2686

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DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

KS

Office Action Summary

Application No.

09/737,229

Applicant(s)

Kim

Examiner

Rafael Perez-Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 14, 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Dec 14, 2000 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference numbers not mentioned in the description:

- a) On **figure 2**, reference number **230** is not mentioned in the description; and

- b) On **figure 3**, reference numbers **300, 310, and 370** are not mentioned in the description.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference numbers in the description, are required in reply to the Office Action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because of the following minor informalities:

- a) On **figures 2 and 3**, reference number **50** should be inserted to identify the block labeled "IGW"; and

- b) On **figures 3 and 4**, reference number **24** identifying the block labeled "MSC" should

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be changed to **14** in accordance with the description of the figures on page 11 line 1 - page 12 line 25 of the specification.

A proposed drawing correction or corrected drawings are required in reply to the Office Action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
 - a) On **page 4 line 1**, replace “RENOT” with --REGNOT-- before “message”;
 - b) On **page 7 line 1**, replace “20” with --24-- in order to properly match what is shown in **figure 1**;
 - c) On **page 8 lines 14 and 15**, delete the sentence “The MSCs 34 are connected to an HLR 42 by means of the signaling links 20.” since it appears to be a duplicate of the preceding sentence;
 - d) On **page 12 line 15**, replace “24” with --14-- in order to properly match what is shown in figure 4 (as corrected in paragraph 3 item b above); and
 - e) On **page 17 line 16 (abstract)**, replace “RENOT” with --REGNOT-- before “message”.

Appropriate correction is required.

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Claim Objections

5. **Claims 1 and 4** are objected to because of the following informalities:
- a) On **line 16 of claim 1**, replace “RENOT” with --REGNOT-- before “message”; and
 - b) On **line 7 of claim 4**, replace “part” with --party-- after “calling”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -- (e) the invention was described in -

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by **Houde et al. (U.S. Patent # 5,978,678)**.

Consider **claim 1**, Houde et al. clearly show and disclose a method of delivering an incoming call (reads on providing a wireless communication service) to an international roaming

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cellular mobile station 16(1) (abstract, figure 1, column 1 lines 18-20, and column 5 lines 1-5), the method comprising the steps of:

a) storing service information as to whether the international roaming cellular mobile station 16(1) (figure 1) subscribes to an international roaming service (taught in accordance with the specification of the present application (page 7 lines 5-11) when the subscriber further has a preferred long distance carrier (read as the international telephone service provider) selected for carrying his/her long distance (read as international) calls (column 5 lines 48-53, column 5 line 60 - column 6 line 4, and column 6 lines 42-53)) in a service profile 108 (subscriber profile) (figure 2) of the mobile station 16 (column 3 lines 31-34 and column 4 lines 60-67);

b) storing information identifying that a switching node identification number (read as the mobile switching center (MSC) identification (MSCID)) is assigned to a switching node 34 located in a second country cellular network 32 in a database of a home location register (HLR) 22 (figure 1) (taught in accordance with the specification of the present application (page 7 lines 11-13) with the identifying information being the MSC IDs) (column 2 lines 27-31 and column 4 lines 55-60);

c) determining whether a registration notification (REGNOT) message is from a switching node (read as an MSC) of a home system based on the identifying information (read as MSC IDs) stored in the database when the REGNOT message is inputted from the switching node 34 (MSC) to the HLR (i.e., by determining that the REGNOT message is from a switching node 34 (MSC) of a second country cellular network 32 (figure 1), they are inherently teaching

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that they are able to determine whether or not the REGNOT message is from a switching node (MSC) of a home system) (column 2 lines 22-32 and column 4 lines 43-60); and

d) sending information as to whether the international roaming cellular mobile station 16(1) (figure 1) subscribes to an international roaming service (as explained above in item a)) to the switching node 34 (MSC) based on the service profile 108 (read as the subscriber information) when the REGNOT message is from the second country cellular network 32 (figure 1) (read as not from the home system) (column 4 lines 43-67).

Consider **claim 2**, and **as applied to claim 1 above**, Houde et al. further disclose the steps of:

e) storing a carrier code (read as the international telephone service provider number) for the international roaming cellular mobile station 16(1) in the HLR 22 (figures 1 and 3, column 2 lines 40-52, column 5 lines 48-53, column 5 line 67 - column 6 line 4, and column 6 lines 42-46); and

f) sending the carrier code (read as the international telephone service provider number) together with an international number (read as the routing number) of the international roaming cellular mobile station 16(1) when a location request signal (message) 202 is received at the HLR 22 (figures 1 and 3, column 5 lines 15-62, and column 6 lines 20-53).

Consider **claim 3**, Houde et al. clearly show and disclose a method of delivering an incoming call (reads on providing a wireless communication service) to an international roaming cellular mobile station 16(1) (abstract, figure 1, column 1 lines 18-20, and column 5 lines 1-5),

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the method comprising the steps of:

a) registering the international roaming cellular mobile station 16(1) at a switching node 34 (read as the mobile switching center (MSC)) (abstract, figure 1, column 2 lines 22-32, column 4 lines 28-67, and column 6 lines 7-12);

b) determining whether a routing request signal (message) 206 for the international roaming cellular mobile station 16(1) is for an international call when the routing request signal (message) 206 is received at the switching node 34 (MSC) (figures 1 and 3, column 2 lines 33-40, column 5 lines 22-43, and column 6 lines 24-36); and

c) generating an international routing number of the international roaming cellular mobile station 16(1) when the routing request signal (message) 206 is for an international call and sending the international routing number (abstract, figures 1 and 3, column 2 lines 37-55, column 5 line 29 - column 6 line 4, and column 6 lines 26-53).

Consider **claim 5**, and **as applied to claim 3 above**, Houde et al. further disclose that said international routing number includes a temporary local directory number, a country code, and a carrier code (read as the system operator code) (figure 3, column 2 lines 37-55, column 5 line 29 - column 6 line 4, and column 6 lines 26-53).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

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obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Houde et al. (U.S. Patent # 5,978,678)** in view of **Koster (U.S. Patent # 6,259,914 B1)**.

Consider **claim 4**, and as applied to **claim 3** above, Houde et al. clearly show and disclose the claimed method except the steps of:

d) assigning a virtual origination number to the international roaming cellular mobile station 16(1) in the switching node 34 (MSC) when a call origination request from the international roaming cellular mobile station 16(1) is received at the switching node 34 (MSC); and

e) sending a call connect message having the virtual origination number instead of a

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calling party number.

Koster clearly shows and discloses a method for implementing and allowing international wireless roaming (read as providing a wireless communication service) to an international roaming mobile station 100 (abstract, figure 1, and column 1 lines 7-10) comprising, among other steps, the steps of:

assigning a mobile directory number (read as the virtual origination number) to the international roaming mobile station 100 in the mobile switching center (MSC) 110 when a call origination request from the international roaming mobile station 100 is received at the MSC 110 (abstract, figure 1, column 3 lines 42-53, column 4 lines 3-14, and column 6 lines 8-17); and

sending a call setup request 510 (read as the call connect message) having the mobile directory number (read as the virtual origination number) instead of a calling party number (column 6 lines 30-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the steps in the calling method taught by Koster into the calling method taught by Houde et al. in order to allow the international roaming cellular mobile station subscriber to also originate calls in the visiting country without regard to the numbering scheme plan in said visiting country by assigning a mobile directory number (virtual origination number) that is, for example, a valid North American Numbering Plan (NANP) formatted number. By assigning such number, any call originated by a mobile station subscriber, of a cellular system located in, for example, Canada or the United States, in said visiting country

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would have been treated by any PSTN switch as a normal call (Koster; abstract and column 3 lines 53-55), thereby allowing the system to be configured easily and facilitate service to international roamers.

Conclusion

9. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to

Crystal Park II
2021 Crystal Drive
Arlington, VA 22202
Sixth Floor (Receptionist)

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number

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for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.



Rafael Perez-Gutierrez
R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**
PATENT EXAMINER

October 28, 2003